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Hugh Walsh

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EXAMINER

JUNTIMA, NITTAYA

ART UNIT

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2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/669,783	Applicant(s) WALSH, HUGH	
	Examiner NITTAYA JUNTIMA	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-17, 20-28, 31-34 and 37-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-17, 20-28, 31-34, and 37-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 4/9/2008.
2. **Claims 5-6, 18-19, 29-30, and 35-36** were canceled. **Claims 1-4, 7-17, 20-28, 31-34, and 37-52** are pending.
3. **Claims 31-34** are rejected under 35 U.S.C. 112, first paragraph
4. **Claims 1-4, 7-17, 20-28, 31-34, and 37-52** are currently rejected under 35 U.S.C. 103(a).

Claim Objections

5. Claim 38 is objected to because of the following informalities:
 - in claim 38, line 6, “a the” should be changed to “a”;
 - line 8, “received” should be inserted before “pause” to distinguish the pause release frame received by the ingress module from the pause release frame generated by the egress module in lines 2-3 of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 31-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The independent claim 31 contains subject matter, i.e., the

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limitation of “instructions for causing the egress module to exercise flow control on the channel for each of the classes of service when the count for one of the classes of service exceeds a predetermined threshold for the class of service,” which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amended portion requires that the flow control will be performed on the channel for all the classes of service (each of the classes) when there is one class that exceeds its threshold.

However, the specification only discloses that the flow control is performed for each of the classes of service when the count for the corresponding class of service exceeds a threshold for that class of service (paragraph 0045). Therefore, in light of the specification, the Office is interpreting the limitation as “instructions for causing the egress module to exercise flow control on the channel for each of the classes of service when the count for the class of service exceeds a predetermined threshold for the class of service.”

Claim Rejections - 35 USC § 103

7 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-2, 7-11, 14-15, 20-22, 25-26, 31-32, 37, 39-44, 46-49, and 51** are rejected under 35 U.S.C. 103(a) as being unpatentable over an art of record, Erimli (US 6,405,258 B1) in view of Chiussi (US 7,027,457 B1).

Regarding **claim 1**, Erimli teaches a network switching device (multiport switch 12, Fig. 1) comprising:

An ingress module (the MAC unit 20, Fig. 2) configured to receive frames of data from a channel (RMII 18, Fig. 1) and store the frames in one or more buffers (buffers located in the external memory 36, Fig. 1). See col. 5, lines 14-27 and col. 6, lines 17-28. Wherein each frame of data has one or more plurality of classes of service (high priority frames and low priority frames, col. 6, lines 54-62).

One or more queues (output queues 58, Fig. 2, col. 8, lines 43-50).

A forwarding module (the port vector FIFO 56, Fig. 2) configured to enqueue each of the buffers by sending a pointer (the frame pointer) for each of the buffers to the one or more queues (output queues 58, Fig. 2) after the ingress module stores the data frames in one or more of the one or more buffers (buffers located in the external memory 36, Fig. 1). See col. 15, lines 6-10.

An egress module (output port 90a, Fig. 6) configured to exercise a flow control (generates and transmits a PAUSE frame) on the channel for each of the classes of service when the number of queue entries for the class of service exceeds a predetermined threshold for the class of service (col. 15, lines 11-46; see also col. 12, lines 57-61).

Although Erimli teaches (i) keeping track of the number of entries/frame pointers currently stored in the output queues 58, Fig. 2 for the respective queue priority, (ii) comparing the number the respective queue entries to the corresponding threshold value in order to determine whether to implement flow control (col. 11, lines 65-col. 12, lines 37, 57-61, col. 15, lines 11-42), and (iii) returning the frame pointer after transmitting the data stored in a buffer for

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a frame received from the channel and having the respective class of service from the network switching device (fetching the frame data from the location in external memory 36 and storing the frame data into the transmit FIFO, then returning the frame pointer to the free buffer queue 64, col. 9, lines 4-23), Erimli does not explicitly teach that the tracking number of queue entries is done by using a plurality of counters, storing a corresponding count, incrementing the count when the forwarding module enqueues one of the buffers, and decrementing the count after the stored data is transmitted, and exercising flow control when the count for the class of service exceeds the threshold as recited in the claim.

However, in an analogous art of packet transmission with flow control (col. 14, lines 30-56), Chiussi teaches using a plurality of counter 330 in Fig. 3 corresponding to different QoS levels to quantitatively keep track of the number of corresponding QoS queues (col. 6, lines 30-33; equivalent to tracking number of queue entries/frame pointers by a plurality of counters and storing a corresponding count) by incrementing a counter when data with an associated QoS is stored into one of the corresponding queues (step 720 in Fig. 7A and col. 12, lines 64-67; equivalent to incrementing count for a class of service) and decrementing the counter when data is removed from the queue (step 730 in Fig. 7B and col. 13, lines 48-52; equivalent to decrementing count for a class of service).

Given the teaching of Chiussi, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Erimli to apply Chiussi's concept of tracking the number of buffers for each class of service using a counter such that the tracking

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number of queue entries, including incrementing and decrementing counter value, would be done by using a plurality of counter values such that a plurality of counters comprising one counter for each of the classes of service wherein each of the counters is configured to store a count for the channel for a respective one of the classes of service, the step of incrementing the count when the forwarding module enqueues one of the buffers storing the data of one of the frames having the respective class of service, and the step of decrementing the count after the data stored in a buffer for a frame received from the channel and having the respective class of service is transmitted from the network switching device, and the step of exercising flow control when the count for the class of service exceeds the threshold by the egress module would be included as claimed. The suggestion/motivation to do so would have been to track and monitor the number of packets in each QoS queue (equivalent to number of entries/frame pointers) for each class of service using a counter as taught by Chiussi (col. 12, lines 65-67 and col. 13, lines 48-51).

Regarding **claim 2**, Erimli also teaches that, wherein, to exercise flow control for one of the classes of service, the egress module (output port 90a, Fig. 6) is further configured to send a pause frame (PAUSE frame) to the channel (RMII 18, Fig. 1 connecting first network station 14a), and wherein the pause frame indicates the one of the classes of service (the PAUSE frame includes Opcode field indicating whether the PAUSE frame corresponds to the high or low priority threshold value). See col. 15, lines 37-46; see also col. 12, lines 57-61 and col. 13, lines 36-40.

Regarding **claim 10**, Erimli also teaches a memory (external memory 36, Fig. 1) comprising the buffers (col. 6, lines 17-28).

Claims 8, 14, and 15 are network switching device claims containing similar limitation as recited in device claims 1, 1, 2, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 1, 1, 2, respectively.

Claims 7, 11, and 20 are integrated circuit (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute an integrated circuit) claims comprising the network switching device of claims 1, 10, and 14, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 1, 10, and 14, respectively.

Claim 21 is a network switch (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute a network switch) comprising the network switching device of claim 14 and is therefore rejected under the same reason set forth in the rejection of claim 14.

Claims 9 and 22 are output-queued network switch (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute an output-queued network switch) claims comprising the network switching device of claims 1 and 14, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 1 and 14, respectively.

Claims 25-26 are method claims corresponding to device claims 1-2, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 1-2, respectively.

Claims 31 and 32 are computer readable medium claims containing instructions for controlling an apparatus similar to device in claims 1 and 2, respectively and are therefore rejected under the same reason set forth in the rejection of claims 1 and 2, respectively with an exception that Erimli does not teach that the instructions are executable by a computer and embodied in a computer program stored on a computer readable medium. However, an Official notice is taken that it is well known in the art to implement the instructions as a computer program to be executable by a computer and store on a computer readable medium for easy installation and portability purposes. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Erimli such that the instructions would be executable by a computer and embodied in a computer program stored on a computer readable medium as claimed for easy installation and portability purposes.

Claim 37 is a network switching device containing a plurality of counters and an egress as recited in claim 1 and therefore is rejected under the same reason set forth in the rejection of claim 1 with the addition of the ingress module that is configured to receive a pause frame and in response to the received pause frame, and the egress module that is further configured cease to transmit the frames of data having the one or more classes of service to be paused which are not explicitly taught by Erimli.

However, Erimli teaches the switching device (multiport switch 12, Fig. 1) comprises an ingress module (the MAC unit 20, Fig. 2) that receives packets from a network station 14 (col. 6, lines 18-23) and that when a first network station 14a receives a PAUSE frame corresponding to high/low priority threshold value from a downstream device such as a multiport switch 12 at an inherent ingress module, its inherent egress module will not transmit frames of data having the corresponding priority (col. 13, lines 36-40 and col. 15, lines 11-13 and 37-64).

Therefore, it would have been obvious to one skilled in the art the time of the invention to further modify the combined teaching of Erimli and Chiussi to apply similar flow control concept to the switching device such that the ingress module of the switching device (multiport switch 12) would be configured to receive a pause frame from a downstream device (e.g., a second network station 14b) and the egress module of the switching device would be further configured to cease to transmit the frames of data having the one or more classes of service to be paused as claimed. The suggestion/motivation to do so would have been to enable the downstream device connecting to the switching device to be able to perform flow control on a sending device, i.e., the switching device, when the downstream device becomes congested by temporarily suspending transmission of data to be transmitted from the sending device to the downstream device the same way that the switching device performs on its upstream device, i.e., a network station 14. Such modification involves only routine skills in the art.

Claim 39 is an integrated circuit (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute an integrated circuit) claim comprising the network switching device of claim 38, and is therefore rejected under the same reason set forth in the rejection of claim 37.

Claim 40 is a network switch (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute a network switch) comprising the network switching device of claim 37 and is therefore rejected under the same reason set forth in the rejection of claim 37.

Claim 41 is output-queued network switch (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute an output-queued network switch) claims comprising the network switching device of claim 37, and is therefore rejected under the same reason set forth in the rejection of claim 38.

Regarding **claim 42**, Erimli also teaches a memory (external memory 36, Fig. 1) comprising the buffers (col. 6, lines 17-28).

Claim 43 is an integrated circuit (CPU 32, SSRAM 36, and multiport switch 12 in Fig. 1 constitute an integrated circuit) claim comprising the network switching device of claim 42, and is therefore rejected under the same reason set forth in the rejection of claim 42.

Claims 44, 46-48 are network switching device claims containing similar limitation as recited in device claims 37, 39-41, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 37, 39-41, respectively.

Claims 49 and 51 are a method claim and a computer readable medium claim corresponding to device claim 2 and computer readable medium claim 32, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 2 and 32, respectively, with an addition step of ceasing to transmit the frames of data having the one or more classes of service to be paused (the PAUSE frame causes the first network station 14a, Fig. 1 to discontinue transmission of data frame, col. 15, lines 44-47).

9. **Claims 3-4, 12-13, 16-17, 23-24, 27-28, 33-34, 38, 45, 50, and 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over an art of record, Erimli (US 6,405,258 B1) in view of Chiussi (US 7,027,457 B1), and further in view of Feuerstraeter (hereinafter “Feuer”) (US 2003/0123393 A1).

Regarding **claims 3 and 4**, Erimli does not teach that the egress module is further configured to terminate flow control on the channel for each of the classes of service by sending a pause release frame indicating the one of the classes of service when the count for the class of service but not yet transmitted from the network switching device falls below a further predetermined threshold.

However, in an analogous art of flow control, Feuer teaches that a flow control agent 214 in Fig. 2 (equivalent to the egress module) performs a flow control by generating a control message in order to suspend transmission of content having a priority level associated with buffer queue 302, 304, or 306 in Fig. 3 (equivalent to the buffers storing frames of data having the class of service) whose number of occupied memory locations has reached a threshold 308 (paragraphs 32-33) and issuing a revised control command (equivalent to a pause release frame) denoting the priority level associated with the buffer queue that becomes available/falls below threshold 308 and transmitting it via channel 106 in Fig. 1 (paragraph 21) to an upstream device when the buffer queue associated with the priority level becomes available/falls below threshold 308, Fig. 3 in order to refresh a disable of communicate (paragraph 44, see also paragraphs 33 and 39, lines 15-22) (equivalent to terminating flow control on the channel for each of the classes of service by sending a pause release frame indicating the one of the classes of service when the count for the class of service falls below a further predetermined threshold for the class of service.

Given the teaching of Feuer, it would have been obvious to one skilled in the art at the time of the invention to further modify the combined teaching of Erimli and Chiussi to apply the concept of issuing a revised control command such that the egress module would be further configured to terminate flow control on the channel for each of the classes of service by sending a pause release frame indicating the one of the classes of service when the count for the class of service but not yet transmitted from the network switching device falls below a further predetermined threshold as claimed. The suggestion/motivation to do so would have been to

enable the transmission when the buffer (e.g., queue) associated with the priority level becomes available/falls below the threshold as taught by Feuer (paragraph 44).

Regarding **claims 12 and 13**, Erimli teaches a reserve module (output queue 58 in Fig. 2/400, Fig. 5A) configured to reserve one or more buffers (one or more buffers reads on a maximum number of memory location(s) in output queue 58/400, Fig. 5A that are allocated for storing frame pointers, col. 15, lines 6-43; see also col. 12, lines 15-22) to the channel (RMII 18, Fig. 1), wherein a pause threshold/a pause release threshold (both are not further defined, read on a value of the low priority watermark threshold for triggering the transmission of a PAUSE frame) for the channel is a function of the number of the buffers reserved to the channel (a value of the low priority watermark threshold is a maximum number of entries that are allowed in the output queue; col. 12, lines 15-22 and col. 15, lines 22-43).

Claims 16, 17, and 23/24 are network switching claims containing similar limitation as recited in device claims 3, 4, and 13, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 3, 4, and 13, respectively.

Claims 27 and 28 are method claims corresponding to device claims 3 and 4, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 3 and 4, respectively.

Claims 33 and 34 are computer readable medium claims containing instructions for controlling an apparatus similar to device in claims 3 and 4, respectively and are therefore rejected under the same reason set forth in the rejection of claims 3 and 4, respectively.

Claims 38 and 45 are network switching claims containing similar limitation as recited in device claim 4, and are therefore rejected under the same reason set forth in the rejection of claim 4.

Claims 50 and 52 are method claim and computer readable medium claim corresponding to device claim 3 and computer readable medium claim 34, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 3 and 34, respectively, with an addition step of resuming transmitting the frames of data having the one or more classes of service to be released which is not taught by Erimli.

However, as shown in Fig. 7, Feuer teaches that when a revised control command in step 714 of Fig. 7 is received by an upstream device, the transmission of additional content according to the priority level is resumed by the upstream device in step 706, paragraph 44 (equivalent to resuming transmitting the frames of data having the one or more classes of service to be released).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to further modify the combined teaching of Erimli and Chiussi such that the step of resuming

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transmitting the frames of data having the one or more classes of service to be released would be included. The suggestion/motivation to do so would have been to enable data to be received when the priority level that has been oversubscribed becomes available again.

Response to Arguments

10. Applicant's arguments filed 4/9/2008 have been fully considered but they are not persuasive.

A. In the Remarks on page 29, the Applicant challenges the Examiner's Official notice because the Applicant argues that the assertion noted in the Official Notice is not a common practice and well known in the art.

In response, Chiussi is replied upon to show that the use of counters to track, i.e., incrementing and decrementing, the number of queues/buffer entries for different classes of service is a common practice and well known in the art as in an analogous art of packet transmission with flow control (col. 14, lines 30-56), Chiussi clearly teaches using a plurality of counter 330 in Fig. 3 corresponding to different QoS levels to quantitatively keep track of the number of corresponding QoS queues (col. 6, lines 30-33; equivalent to tracking number of queue entries/frame pointers by a plurality of counters and storing a corresponding count) by incrementing a counter when data with an associated QoS is stored into one of the corresponding queues (step 720 in Fig. 7A and col. 12, lines 64-67; equivalent to incrementing count for a class of service) and decrementing the counter when data is removed from the queue (step 730 in Fig. 7B and col. 13, lines 48-52; equivalent to decrementing count for a class of service).

B. In the Remarks on page 30, Applicant argues that even if Erimli is modified to include counters to keep track of the number of queue/buffer entries, as asserted in the Official notice - combined with Chiussi, there is no teaching for “an egress module configured to exercise flow control on the channel for each of the classes of service when the count for the class of service exceeds a predetermined threshold for the class of service” as claimed.

In response, Examiner respectfully disagrees. Erimli clearly teaches an egress module (output port 90a, Fig. 6) that is configured to exercise a flow control (generates and transmits a PAUSE frame) on the channel for each of the classes of service when the number of queue entries for the class of service exceeds a predetermined threshold for the class of service (col. 15, lines 11-46; see also col. 12, lines 57-61).

What Erimli does not specify how the number of queue entries for the class of service is tracked. However, the claim requires the use of counter and count to keep track of the queue entries.

Chiussi teaches using a plurality of counter 330 in Fig. 3 corresponding to different QoS levels to keep track of the number of corresponding QoS queues (col. 6, lines 30-33) by incrementing a counter when data with an associated QoS is stored into one of the corresponding queues (step 720 in Fig. 7A and col. 12, lines 64-67) and decrementing the counter when data is removed from the queue (step 730 in Fig. 7B and col. 13, lines 48-52).

Therefore, by applying Chiussi’s concept of tracking the number of buffers for each class of service using a counter and count to track number of queue entries for each class of service to the system of Erimli would result in the egress module being able to exercise flow control when the count for the class of service exceeds the threshold by the egress module as claimed.

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C. In the Remarks on page 31, the Applicant argues that Erimli fails to provide motivation or modification.

In response, Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is the commonly known to use a counter and count to track the number of queue entries for each class of service as evidently supported by Chiussi (col. 12, lines 65-67 and col. 13, lines 48-51). In addition, the Applicant fails to point out an error in the motivation.

D. Based on the explanations provided above, it is therefore respectfully submitted that all claim limitations are met and the rejection is maintained.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NITTAYA JUNTIMA whose telephone number is (571) 272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nittaya Juntima/
Examiner, Art Unit 2616
6/28/08

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616